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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/777,607

02/11/2004

Earl T. Cohen

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02/07/2008

THE LAW OFFICE OF KIRK D. WILLIAMS
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EXAMINER

SIDDIQI, MOHAMMAD A

ART UNIT

PAPER NUMBER

2154

MAIL DATE

DELIVERY MODE

02/07/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/777,607

Applicant(s)

COHEN ET AL.

Examiner

Mohammad A. Siddiqi

Art Unit

2154

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 11 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>01/20/2006, 08/03/2007</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-31 are presented for examination.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. Claims 1-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Carter et al. (7,161,902) (hereinafter Carter).

4. As per claims 1, 6, and 11, Carter discloses a method, a computer-readable medium containing computer-executable instructions, and an apparatus, for use in rate controlling an activity, the method comprising:

identifying an approximated inverse rate (controlled rate from the scheduler, 304, 305, fig 3, col 3, line 67- col 4, line 8), a fix-up adjustment

value, and a quantum (adjusting the dispatch rate, col 4, lines 6-8; col 9, lines 12-28);

maintaining an activity measurement value based on a measure of activity (col 3, lines 9-20; col 9, lines 12-28);

maintaining a rate control value based on the measure of activity and the approximated inverse rate (col 9, lines 9-20; col 3, line 67-col 4, line 20; col 9, lines 12-28);

applying the fix-up adjustment value once each said quantum to the rate control value to maintain rate accuracy of the activity (adjusting the dispatch rate, col 3, lines 32-47; col 4, lines 6-8; col 9, lines 12-28).

5. As per claims 2, 7, and 12, Carter discloses the activity includes sending packets of a stream of packets (col 9, lines 12-33).

3. As per claims 3, 8, and 13, Carter discloses the measure of activity is a number of bytes or packets sent (col 9, lines 12-33).

6. As per claims 4, 9, and 14, Carter discloses the rate control value is a scheduling value used for determining the relative ordering or timing of a next one or more packets of the stream of packet (col 3, lines 32-47; col 6,

lines 44-58).

7. As per claims 5, 10, and 15, Carter discloses said applying the fix-up adjustment value once each quantum to the rate control value includes dithering the rate control value to either round-up or not to round-up the rate control value based on a random number (col 3, lines 32-47; col 6, lines 44-58; col 8, line 14).

8. As per claims 16, 21, and 27, Carter discloses a method, a computer-readable medium containing computer-executable instructions, and an apparatus, for use in scheduling packets, the method comprising: identifying in a current slot a scheduling item corresponding to a packet (col 9, lines 35-53);

identifying an approximated inverse rate (adjusting the dispatch rate, col 3, lines 9-46; col 4, lines 6-8; col 9, lines 12-28),

a fix-up adjustment value, and a quantum value corresponding to the scheduling item adjusting the dispatch rate, col 3, lines 9-46; col 4, lines 6-8; col 9, lines 12-28);

identifying a last adjusted slot for the scheduling item (col 3, lines 9-46; col 10, lines 8-50);

adjusting a bytes sent value based on a number of bytes of the packet to identify a new bytes sent value (fig 3, col 3, lines 9-46; col 10, lines 8-50); and

in response to identifying that the bytes sent value is greater than or equal to a quantum value corresponding to the scheduling item: (a) identifying a new last adjusted slot for the scheduling item (fig 3, col 3, lines 9-46; col 10, lines 9-30), said identifying the new last adjusted slot including summing a product of the approximated inverse rate and the quantum value, the fix-up adjustment value, and the last adjusted slot (fig 4, col 3, lines 9-46; col 10, lines 9-30); and (b) determining a next slot for the scheduling item (fig 4, col 3, lines 9-46; col 10, lines 9-30), said determining the next slot including adding the product of the approximated inverse rate and the new bytes sent value to the new last adjusted slot (fig 4, col 3, lines 9-46; col 9, line 34-col 10, line 30).

9. As per claims 17, 22, and 28, Carter discloses identifying the last adjusted slot for the scheduling item includes subtracting the product of the approximated inverse rate and the bytes sent value from the current slot (col 3, lines 9-20; lines 31-47).

10. As per claims 18, 23, and 29, Carter discloses the fix-up adjustment value is determined based on the error induced by the approximated inverse rate during a quantum corresponding to the scheduling item (fig 3, sampling, col 3, lines 9-20; lines 31-47).

11. As per claims 19, 24, and 30, Carter discloses in response to identifying that the bytes sent value is less than a quantum value corresponding to the scheduling item, determining the next slot including adding the product of the approximated inverse rate and the new bytes sent value to the last adjusted slot item (fig 3, sampling, col 3, lines 9-20; lines 31-47; col 6, lines 44-53).

12. As per claims 20, 25, and 21, Carter discloses identifying the new last adjusted slot for the scheduling item includes dithering the new last adjusted slot to either round-up or not to round-up the new last adjusted slot based on a random number item (fig 3, sampling, col 3, lines 9-20; lines 31-47; col 6, lines 44-58; col 8, line 14).

Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

U.S. Patent 5,748,614

U.S. Patent 6,438,106

U.S. Patent 5,883,895

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mohammad A. Siddiqi whose telephone number is (571) 272-3976. The examiner can normally be reached on Monday -Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan J. Flynn can be reached on (571) 272-1915. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

~~SUBPUBLICATIONS IS
ADVISORY PATENT EXAMINER
FLYNN~~

MAS